



DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

Draft NIST Interagency Report (NISTIR) 7823, Advanced Metering Infrastructure Smart Meter Upgradeability Test Framework; Request for Comments

[Docket No.: 120530125-2125-01]

AGENCY: National Institute of Standards and Technology, Commerce.

ACTION: Notice and Request for Comments.

SUMMARY: The National Institute of Standards and Technology (NIST) seeks comments on Draft NISTIR 7823, *Advanced Metering Infrastructure Smart Meter Upgradeability Test Framework* (Draft NISTIR 7823). This draft document provides an example test framework and conformance test requirements for the firmware upgradeability process for the Advanced Metering Infrastructure (AMI) Smart Meters. The target audience for Draft NISTIR 7823 includes numerous stakeholders in the Smart Grid space, particularly customers, Smart Meter manufacturers, certifying bodies, test labs, and standards development organizations.

DATES: Comments must be received by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Written comments concerning the document may be sent to: Information Technology Laboratory, ATTN: Michaela Iorga, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8930, Gaithersburg, MD 20899-8930.

Electronic comments should be sent to: Michaela Iorga at michaela.iorga@nist.gov, with a Subject line: NISTIR 7823 Comments

Draft NISTIR 7823, *Advanced Metering Infrastructure Smart Meter Upgradeability Test Framework*, is available electronically from the NIST Web site at:
<http://csrc.nist.gov/publications/PubsDrafts.html>

FOR FURTHER INFORMATION CONTACT: Michaela Iorga, (301) 975-8431, email: michaela.iorga@nist.gov, or Nelson Hastings, (301) 975-5237, email: nelson.hastings@nist.gov, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8930, Gaithersburg, MD 20899-8930.

SUPPLEMENTARY INFORMATION:

NIST publishes this notice to solicit comments on Draft NISTIR 7823, *Advanced Metering Infrastructure Smart Meter Upgradeability Test Framework* (Draft NISTIR 7823). This draft document proposes an example test framework and conformance test requirements for the firmware upgradeability process for the Advanced Metering Infrastructure (AMI) Smart Meters. The conformance test requirements in the Draft NISTIR 7823 are derived from the National Electrical Manufacturers Association (NEMA) *Requirements for Smart Meter Upgradeability* standard, which defines requirements for Smart Meter firmware upgradeability in the context of an AMI

system for industry stakeholders such as regulators, utilities, and vendors. Draft NISTIR 7823 identifies test procedures that the vendors and testers can voluntarily use to demonstrate a system's conformance with the NEMA standard. The testing procedures identified as "Required Vendor Information" apply to vendors, and the procedures identified as "Required Test Procedures" apply to testers.

Draft NISTIR 7823 includes a description of conformance tests that apply to Smart Meters and Upgrade Management System (UMS). The conformance tests applicable to Smart Meters are described in the following sections: Section 2, the Mandatory Functional Requirements, Section 3, the Conditional Functional Requirements, Section 4, the Optional Functional Requirements, and Section 5, the Non-testable Functional Requirements. The conformance tests applicable to UMS are described in Section 6.

The test framework identified in the Draft NISTIR 7823 is intended to provide objectivity and repeatability in the testing process, and to ensure that a consistent method is used to assess conformance with the NEMA Requirements for Smart Meter Upgradeability. The NEMA specification does not address specific details on the interfaces, commands, or protocols needed to achieve a firmware upgrade, nor does it specify how the functional and security requirements contained in the specification are to be implemented.

Draft NISTIR 7823 provides a high-level overview of the test procedures, in addition to providing more detailed steps for conducting the test, reviewing test results, and producing records to assess and report on results of the test.

Comments are requested on the test framework, conformance test requirements, and test procedures described in the document.

Dated: July 2, 2012

Willie E. May
Associate Director for Laboratory Programs

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